



HPSC0070

Eugenics in Science and Culture

Syllabus

v2

Session	2021-22
Module tutor	Professor Joe Cain
Module tutor	Dr Maria Kiladi

V2 has revised deadlines for draft sections and final paper.

1. Description

Eugenics combined science and politics to create social policies intent on “improving the stock” of some human groups at the expense of others. This module investigates eugenics as a history of science and technology operating in cultures around the world. It considers eugenics as a history of people creating, interpreting, rejecting, and suffering from decisions grounded in scientific (and pseudo-scientific - this boundary is important) practices supported by eugenics campaigners. Importantly, this module presents eugenics through the intersection of categories such as gender, race/ethnicity, ableism, class, nationalism, and political philosophy. Eugenics is a subject with strong local (UCL) connections, and it is a subject with diverse global involvements and impacts. Ultimately, this module explores the history of eugenics to better answer far-reaching questions about the role of science in policy development, about the power of science in public understanding, and about rival approaches to expertise in the knowledge economy.

In the 2021-22 session, we focus specifically on the subject of the history of eugenics research and advocacy at UCL and in other London institutions.

1.1 Important notice

In this module you will encounter offensive views of many kinds. These are presented in the context of historical analysis and interpretation. Do not imply advocacy from reference. The module has several mechanisms for safe spaces that allow students to discuss their reactions to the material and their reflections about its relevance to issues today. Students also are reminded that the tutors, the department, and the university have a zero tolerance policy on discriminatory

behaviours, and we are governed by clear codes of conduct. Respect is mandatory.

Any student who wishes to note something they believe violates these policies can do so directly to the [module tutors](#) in the first instance, the [STS Heads of Department](#) in the second instance, or through [UCL Report and Support](#).

1.2 Getting started

Students wanting an overview of the topic are directed to several sources. Levine (2017) is a very good “short” introduction to eugenics as a topic across the twentieth century. Another excellent introduction is Paul (1995), which is predominantly American in focus. If either inspires you to want more, Kevles (1985) probably is the most widely read general history of eugenics as it developed in Anglophone countries. The content is rich. As a historian’s book, it shows the strengths and weaknesses of a large class of historical writing on eugenics. For a multi-national, multi-approach volume, see Bashford and Levine (2010)

Darwin (1928) is an example of an inexpensive trade book advocating eugenics that was widely read in the nineteen thirties. The author, Leonard Darwin, was important in the English eugenics movement. As a text, it demonstrates the shifting landscape of public interpretation of science and public appropriation of scientific knowledge.

2. Key Information

2.1 Digital resources

Type	Location
Moodle	tinyurl.com/moodle0070 (link)
Timetable	tinyurl.com/hpsc0070 (link)
UCLReadingList	tinyurl.com/reading0070 (link)

2.2 Module tutors

Tutor	Professor Joe Cain
Email	J.Cain@ucl.ac.uk
Telephone	0207 679 3041
Web	ucl.ac.uk/sts/cain (link)
Office location	In STS: 22 Gordon Square, room 4.3
Office hours	tinyurl.com/profjoecain (link) – book online For 2020-21 Term 1 all meetings will be online

Tutor	Dr Maria Kiladi
Email	M.Kiladi@ucl.ac.uk
Telephone	0207 679 4004
Web	UCL Iris (link)
Office location	In STS: 22 Gordon Square, room 4.3
Office hours	tinyurl.com/drkiladi (link) – book online

3. Aims and Objectives

3.1 Aims

HPSC0070 aims include:

- equip students to critically question and analyze the social, political and ethical aspects of ongoing science and technology
- integrate key themes in history and philosophy of science, science communication, and science policy
- develop analytical and interpretative skills using relatively commonplace elements of science and technology
- think more about the history of eugenics and develop mature views as to its sources, impacts, and legacy for universities, science, and culture

3.2 Objectives

By the end of the module, students should be able to:

1. describe key elements in the history and philosophy of science as they relate to eugenics
2. describe key elements of science communication found in the activities of eugenics advocates, organizations, and critics
3. describe key elements of science policy as they relate internationally to eugenics campaigning
4. critically analyze the social, political, and ethical aspects of eugenics
5. relate key insights from HPS and STS to research about eugenics, with particular attention to intersectionality and the importance of alternative voices in history
6. demonstrate an ability to research HPS and STS questions, producing substantial packages of information, well organized and clearly focused
7. effectively communicate their views

The course will improve:

1. ability to interpret events
2. ability to work in an interdisciplinary fashion
3. ability to apply abstract models to specific instances
4. ability to integrate social, cultural, political, industrial, and economic contexts of science
5. ability to communicate ideas clearly in ways appropriate to the context
6. ability to communicate ideas effectively

For students in other degree programs, the course will increase:

1. awareness of the evolving and complex role of STM in public policy, past and present; likewise, the relations between STM and the State more generally, and STM and values
2. awareness of the influence of culture on scientific ideas, practices, resources and opportunities; that STM sometimes shows distinct differences when undertaken by different people in different cultures
3. awareness that the understanding and use of STM information and knowledge changes in different settings and can vary between different groups

Improving writing skills – the production of prose that is clear, deliberate, and to the point – is an ancillary objective of the assessment.

4. Assessment

4.1 Summary

Code	Weight	Type	Detail	
CW	100%	Coursework	essay (3500 words)	

The coursework will be divided into three sections. Support for each section will be provided in the module. Students submitting draft parts on schedule will receive speedy formative feedback. The complete project will have a final due date, after which summative feedback and mark will be provided for the work as a whole.

	Weight	Type	Detail	Due date (17:00)
	25%	part A	Author	03 Nov 2021 (draft)
	25%	part B	Text	17 Nov 2021 (draft)
	50%	part C	Analysis	13 Dec 2021 (draft)
	100%	Complete project		12 Jan 2022 (final)

4.2 Assignment

This year's assignment focuses on eugenics research and advocacy in and around UCL. What was the research and advocacy that took place by personnel associated with our university? The assignment is to write a research paper, not to exceed 3,500 words, that helps to answer this question.

Your paper will focus on one publication associated with the history and legacy of eugenics at UCL. That publication will be referred to here as The Publication. The Publication you will research will be assigned to you by the module tutors in the second week of the teaching term.

Your essay will consist of three parts: (1) investigate the author, (2) analyze the publication, and (3) place the publication in a historical context. Module tutors will help with each part. Due dates are set so students write their work in sections, and each section will receive formative assessment. Then, the sections will be revised and combined into the final research paper that is submitted for formative assessment and a final mark. Last year, this approach led to some fantastic essays, with the overall average for final papers to be 73.7 ± 5.1 , meaning 2/3rds of the papers received marks between 69 and 79.

Elements of this assignment make use of several types of skills: (1) data collection and sifting, (2) analysis of interpretation and perspective, and (3) original research and synthesis. Students will produce original historical research along these lines.

Part A: Author

Assignment: Place The Publication in a biographical context.

Who was the author? What was their expertise? How did The Publication fit into a larger profile of their research and writing? How was The Publication connected to other research questions they investigated in their career? Is there something notable about the institutional setting in which this person worked that might help a reader interpret The Publication?

Authors rarely work in isolation. Be sure to identify collaborators, assistants, and supporting actors where you want to assert importance. Be sure to investigate archives for related materials. Perhaps you have found a rich cache of manuscripts and notebooks that help with interpreting the work.

If The Publication is co-authored discuss the situation with the module tutor. You might identify a

principal author; in which case this will be the person investigated in your project. You might investigate collaboration as a process, in which case some adaptation will be allowed.

Part A should not be more than 25% of your essay.

Part B: Text

Assignment: Interpret the publication as a historical text.

Exegesis is the fine art of reading a text and identifying the author's intent. What is The Publication's central message? What evidence and argument does it use to make its case? Demonstrate you have a thorough understanding of The Publication as a text. Your exegesis should give the reader a thorough sense that you understand the key substance of The Publication. It is not a rote summary.

Second, apply critical analysis. You can do this in many ways. For example, you might focus on methods, epistemology, and assumptions. Or, you might focus on subtexts. Or, you might follow the relationship between data and calculations to ensure B follows from A and C follows from B. Or, you might focus on the relationship between text and references or text and reviews (if any).

Part B should not be more than 25% of your essay.

Part C: Context

Assignment: Place The Publication in a relevant historical context or interpretation.

Create an analysis to help readers link The Publication to a transcending historical theme, such as those raised in weeks through this module. You may choose to use a theme of your own selection, too. Feel free to discuss this with the module tutors. Clearly describe the transcending theme, linking it to core secondary literature. Clearly show how The Publication illustrates that theme. Clearly show the benefits from applying this theme, such as for amplifying, revising, or refuting analyses developed by key historians associated with the historiography of eugenics at UCL. Consider likely criticisms of your views, too.

Part C should not be more than 50% of your essay.

Part D: List of References

Assignment: Include a complete, well-organized, and clear list of references.

A list of references does not add to your essay's word count. A list of references includes all published work cited in the main body of your essay. It also includes details for primary source materials cited in your essay. It does not include items not cited in your essay and it is not a catalogue of items that could be relevant.

Additional Elements

You are welcome to include images, tables, and figures in your essay provided they add value to your work. Avoid decorative items. Be sure to include captions and to identify sources, where appropriate.

You are welcome to include appendix materials. Appendix materials might include data sets that assist you in making a point in your analysis. They might include catalogue materials related to archive caches discovered in your research.

Additional material is not included in the word count and must be supplemental to the main body of the essay. It cannot be mere continuation of the main body.

4.3 Criteria for assessment

Students are expected to use [ProfJoeCain's style guide for HPSC modules](#).

For 2021-22, the criteria for assessment will take into account limitations students will

experience in accessing archives and libraries owing to pandemic restrictions.

Specific criteria for assessment will be made available for each project element. These will be distributed via Moodle. The general focus of these criteria emphasize:

- depth of scholarship and use of resources beyond those in lecture and required reading
- ability to identify both major and subtle points of the subject
- extent of your critical assessment
- evidence you provide for having reflected on and extended module content and themes
- general scholarly presentation of the work performed

My most frequent criticisms on student essays relate to:

- too much description/summary of readings and not enough analysis
- not developing your own argument
- no evidence of independent research
- poor organisation and poor referencing techniques
- poor choice of sources (such as the *Encyclopaedia Britannica* or *Wikipedia*)

5. Module Plan

The 2021-22 offer of HPSC0070 will be delivered via remote technologies. Activities will be divided into several categories: asynchronous content, synchronous content, independent study, and more.

5.1 Asynchronous content

Asynchronous content will be posted on Moodle, with instructions for when and how this material should be engaged. The purpose of this content is to present new content, introduce students to alternative perspectives, engage key source materials, and identify possible answers to core issues. Content is constructed around specific themes and questions.

In addition, forums are used to encourage student engagement and interaction.

5.2 Synchronous content = live seminars

This module has a 1x1-hour face-to-face live meeting each week. For simplicity, we shall refer to these sessions as “seminars”.

Seminars will be held via Zoom.

Instructions for how to prepare for seminars will be provided on Moodle. In general, seminars will be used to discuss asynchronous materials and essential readings as well as for students to raise questions for discussion and to provide additional materials. All seminars will be recorded, with the recordings posted on Moodle shortly thereafter. Students are expected to attend the seminars. Students also are expected to complete asynchronous materials prior to the live seminar. Attendance will be recorded.

We expect to schedule additional synchronous sessions online to support research for the assignment. Details will be provided in the seminars.

Students seeking one-to-one discussion or private consultation should book time during office hours.

5.3 Independent study

Students are expected to make time for independent research and self-directed reading related to the modules they study. This should include approximately 4 hours of independent reading per week and 4 hours of research per week associated with their assignments.

Material relating eugenics and many subjects is available through UCL Library's services. Significant general resources are noted on Moodle.

5.4 Additional opportunities for discussion and engagement

Class time will be focused on specific learning objectives. Experience shows the subject of this module provokes far more attention, and far more diverse attention, than can be encompassed within the strict confines of the formal timetable. To expand capacity and to foster independent learning, additional opportunities for engagement will be provided. Students are encouraged to use the Moodle forum to discuss themes of interest to them.

Students with particular interests in the subject should raise this with the module tutors, and options will be considered. Some possible activities, such as visits to London sites, may not be possible during requirements for physical distancing. Other possible activities, such as guest presentations and roundtables will be considered if students show interest and organizational zeal.

6. Schedule

Treat this schedule as provisional. Our schedule may change this year as we adapt to new events and to the pace of your work in the module.

Activities for the scheduled week are posted on Moodle. Students are expected to complete the asynchronous activities prior to the session and to come to the live session prepared to discuss.

UCL Week	Date	Seminar Topic	Essential Readings and Recommended Readings
6	05 Oct	Introduction	<i>Essential:</i> three recent articles are posted on ReadingLists@UCL for this module: tinyurl.com/reading0070
7	12 Oct	A quick history of eugenics at UCL	<i>Essential:</i> Farrall (2019 [1969]: 103-179)
8	19 Oct	Two traditions of eugenics as science	<i>Essential:</i> Paul (1995: 50-71) Soloway (1995: 226-258)
9	26 Oct	Eugenics as popular science	<i>Essential:</i> Wiggam (1927) Farrall (2019 [1969]: 203-249) <i>Recommended:</i> Larson (1991) Vance Dorey (1999: 25-39) Chesterton (1922)
10	02 Nov	What is the history of eugenics a history of?	<i>Essential:</i> Bonnett (2008) and read <u>one</u> other: Agar (2012: 1-6, 44-62) Freedon (1979) Saraiva (2016: 1-16) Pauly (1993)
11		Reading Week	

UCL Week	Date	Seminar Topic	Essential Readings and Recommended Readings
12	16 Nov	Disability, "lives not worth living"	<i>Essential:</i> Gosney and Popenoe (1929: v-xvi, 48-69, 116-135) Proctor (1988: 177-222) <i>Recommended:</i> Fulbrook (2018: 45-68)
13	23 Nov	Race, immigration, class	<i>Essential:</i> Mosse (1978: 77-93) Garrard (1971: 48-65) <i>Recommended:</i> Huxley (1944: 163-180) Haller (1971: 203-210) Seth (2018)
14	30 Nov	Women's health and the regulation of women's behaviour	<i>Essential:</i> Carey (2012) Ladd-Taylor (1994: 1-14) <i>Recommended:</i> Williams (2011) Stopes (1921: 233-252)
15	07 Dec	Empire, population growth, and international interventions	<i>Essential:</i> Searle (1976: 34-44) Blacker (1952: 151-185) Bangham and Chadarevian (2014) <i>Recommended:</i> Subramanian (2020) Kellogg (1913)
16	14 Dec	Galton and Galtoniana	<i>Compare:</i> Pearson (1922) Darwin (1914) <i>Also Essential:</i> Brauer (2009) <i>Recommended:</i> Kevles (1985: 3-19)

7. Plan for Each Week

Moodle is the central organizing tool for learning in this module. We meet face-to-face through Zoom. Links will be provided on Moodle to the Zoom sessions.

7.1 Weekly workload for this module

Students are expected to undertake several activities each week for this module, focusing on the theme identified as the session topic:

1. **live seminars** (1 hour per week; times are identified in the UCL Timetable; plan 2 hours preparation time) - The purpose of the seminar time is for tutors to present content associated with the week's theme and to offer help sessions supporting the projects.
 - a. In most weeks, tutors will deliver live face-to-face presentations or lead class discussions during this scheduled time. Attendance is expected from students.
 - b. Moodle will list work expected before, during, and after the live class sessions. Prior to the scheduled seminar, students are expected to complete any asynchronous activities prescribed by tutors in the weekly instructions.
2. **engagement on projects** (4 hours per week) - students are expected to make time to read, research, and reflect upon relevant material supporting their essay writing. This means going beyond simple regurgitation of information or trite analysis. Also, time for revision is essential for producing polished, readable, and insightful writing.
3. **independent reading** (4 hours per week) - students are expected to undertake independent reading in subjects associated with this module. Tutors will offer suggestions for supplemental reading, and peers can offer suggestions, too. Finding relevant material is an essential professional skill and should not be taken lightly. Students are encouraged to share their growing understanding via forums on Moodle. Students also should be reading *New Scientist* each week as a core element of their general studies. This will support projects; it also will contribute to open-ended discussions.
4. **participate in Moodle forums** (1 hour) - physical isolation can be frustrating for many reasons. One is the potential to lose social interaction with peers. Forums are provided as one alternative. Students are expected to scan forum discussions and to participate where they believe they can make an active, positive contribution. Forums are monitored by module tutors.

Reading Week is scheduled for UCL Week 11 and UCL Week 25, which are the sixth week of formal teaching in the teaching terms. During these weeks, no tutor-led activities are scheduled. Instead, students are given time to catch-up where needed and to read more widely in their subject, using the wide variety of resources available to them as members of the UCL community. Students are encouraged to use online forums to discuss their discoveries as they might do through other social media. Students are expected to be pursuing their studies during this week. It is not a holiday.

7.2 Required materials and additional resources

The historical literature on eugenics as an international phenomenon is voluminous. The literature offering analytical tools useful for interpreting eugenics is much larger still. Add to these an ever-expanding range of tertiary material and commentary. In this module, we sample; we know this sample barely scratches the surface.

Essential materials should be read prior to the session they are associated with. We have tried to limit the amount of essential materials to the equivalent of two journal articles or book chapters per week per topic.

Recommended materials add variety and depth. There's no expectation these will be read for class discussions, but they are offered for students with particular interests in the topic. Also,

they serve as launching points for research in support of the assignment.

Optional materials are posted knowing these will be of specific help for some student projects or they have been proposed by students to offer complementary perspectives and additional analytical frameworks. The module tutors welcome recommendations send to them, too.

8. Important Policy Information

Refer to the *STS Student Handbook*. As this is an HPSC module, we follow the rules of that handbook.

8.1 Essay extensions and mitigations

Information about extensions and mitigations is provided in the [*STS Student Handbook*](#). Individual tutors cannot grant extensions on their own initiative, so please do not ask.

8.2 Project feedback

Your feedback and first marks on each project will be accessible via Moodle, normally two weeks (15 working days) after the due date. Please note that first marks are provisional and might change after second marking and moderation by external examiners. Marks are confirmed and fixed in June at the STS Board of Examiners.

Please focus on the feedback provided by the first marker, which is what will allow you to improve in the next piece of coursework.

You should discuss all your feedback with your personal tutor with the aim of identifying weaknesses and possible routes for improvement.

8.3 Course communications

Module tutors will use several paths to communicate with you:

- Moodle Announcements: the principal means for communications in this module.
Hint: You can set Moodle to “digest” communications (collecting all notices send in one day into a single email sent once per day). We find “digest” helps keep us organized and avoids disruption hour-to-hour in my day.
- Moodle FAQ: the same questions tend to repeat, so we’ll post on the Moodle FAQ those frequently-asked questions that keep coming up.
- Moodle Forums and Chat: We scan these most days, normally first thing in the morning, and you’ll likely find answers to questions here, too.
- If we have a matter for you specifically, we’ll communicate via your UCL email address. We don’t use other email addresses. We’ll put “0070” in the subject line to help you filter.
Hint: If you want help managing email using filters, see UCL IS’s “how-to” guides:
<https://www.ucl.ac.uk/isd/how-to-guides>

You communicating with module tutors:

- office hours: you have dedicated time in our diary for office hours. That’s time we make available for face-to-face conversations online. Schedule an appointment via MS Bookings (see contact information at the top of this syllabus). We’ll normally meet students via Teams. We also will have drop-in times online, which operate on a queuing system.
- email: We understand email is not ideal for every communication. Please also prioritize: use email for confidential and personal matters (e.g., tell me about a SORA or if an accessibility obstacle exists that we need to sort), send an email only after checking for

information on Moodle. Please do not expect a response outside normal working hours (Monday–Friday (09:00–17:00 GMT), and you should be courteous in your communications with staff and fellow students.

9. Readings

ReadingLists@UCL has access routes to all essential and most recommended materials. To access the ReadingList for this module: tinyurl.com/reading0070

Agar, Jonathan. 2012. *Science in the Twentieth Century and Beyond*. Cambridge: Polity.

Bangham, Jenny, and Sorayade Chadarevian. 2014. Human heredity after 1945: Moving populations centre stage. *Studies in History and Philosophy of Science Part C: Studies in History and Philosophy of Biological and Biomedical Sciences* 47 (A):45-49.

Bashford, Alison, and Philippa Levine. 2010. Oxford handbook of the history of eugenics. Oxford: Oxford University Press.

Blacker, C. P. 1952. *Eugenics. Galton and After*. London: Gerald Duckworth and Co.

Bonnett, Alastair. 2008. Whiteness and the West. In *New Geographies of Race and Racism*, eds. Claire Dwyer, and Caroline Bressey, 17-28. Aldershot: Ashgate Publishing.

Brauer, Fae. 2009. Framing Darwin: A Portrait of Eugenics. In *The Art of Evolution: Darwin, Darwinisms, and Visual Culture*, eds. Barbara Larson, and Fae Brauer, 124-154. Dartmouth: Dartmouth College Press.

Carey, Jane. 2012. The Racial Imperatives of Sex: birth control and eugenics in Britain, the United States and Australia in the interwar years. *Women's History Review* 21 (5):733-752. doi:10.1080/09612025.2012.658180.

Chesterton, Gilbert Keith. 1922. What is Eugenics? In *Eugenics and Other Evils*, ed. Gilbert Keith Chesterton, 3-11. London: Cassell and Company.

Darwin, Francis. 1914. Francis Galton, 1822-1911. In *Twelve Galton Lectures: A Centenary Selection with Commentaries*, eds. Steve Jones, and Milo Keynes, 1-24. London: Galton Institute.

Darwin, Leonard (Major). 1928. *What is Eugenics?* The Forum Series. London: Watts and Co.

Farrall, Lyndsay Andrew. 2019 [1969]. *The origins and growth of the English eugenics movement, 1865-1925*. STS Occasional Papers, vol. 9. London: UCL Department of Science and Technology Studies (STS).

Freedon, Michael. 1979. Eugenics and Progressive Thought: a Study in Ideological Affinity. *The Historical Journal* 22 (3):645-671. doi:10.1017/S0018246X00017027.

Fulbrook, Mary. 2018. *Reckonings: Legacies of Nazi Persecution and the Quest for Justice*. Oxford: Oxford University Press.

Garrard, John A. 1971. *The English and Immigration, 1880-1910*. London: Oxford University Press.

Gosney, E. S., and Paul Popenoe. 1929. *Sterilization for Human Betterment: A Summary of Results of 6,000 Operations in California, 1909-1929*. New York: Macmillan.

Haller, John S., Jr. 1971. *Outcasts from Evolution: Scientific Attitudes of Racial Inferiority, 1859-1900*. Carbondale, IL: Southern Illinois University Press.

Huxley, Julian. 1944. *On Living in a Revolution*. London: Chatto and Windus.

Kellogg, Vernon. 1913. Eugenics and Militarism. *Atlantic Mon* 112:99-108.

Kevles, Daniel. 1985. *In the Name of Eugenics. Genetics and the Uses of Human Heredity*. Cambridge, MA: Harvard University Press.

Ladd-Taylor, Molly. 1994. *Mother-Work: Women, Child Welfare, and the State, 1890-1930*. Urbana and Chicago: University of Illinois Press.

Larson, Edward J. 1991. The rhetoric of eugenics: Expert authority and the Mental Deficiency Bill. In *British Journal for the History of Science*.

Levine, Philippa. 2017. *Eugenics: A Very Short Introduction*. Oxford: Oxford University Press.

Mosse, George Lachmann. 1978. *Toward the Final Solution: A History of European Racism*. London: Dent.

Paul, Diane. 1995. *Controlling Human Heredity: 1865 to the Present*. Atlantic Highlands, NJ: Humanities Press.

Pauly, Philip J. 1993. The eugenics industry - growth or restructuring? *JHB* 26:131-145.

Pearson, Karl. 1922. *Francis Galton, 1822-1922: A Centenary Appreciation*. Questions of the Day and of the Fray, vol. 11. London: Cambridge University Press.

Proctor, Robert. 1988. *Racial Hygiene: Medicine Under the Nazis*. Cambridge, MA: Harvard University Press.

Saraiva, Tiago. 2016. *Fascist Pigs: Technoscientific Organisms and the History of Fascism. Inside Technology*. Cambridge, MA: MIT Press.

Searle, G. R. 1976. *Eugenics and Politics in Britain, 1900-1914*. Noordhoff: Leyden.

Seth, Suman. 2018. *Difference and disease: medicine, race, and the eighteenth-century British Empire*. Cambridge: Cambridge University Press.

Soloway, Richard A. 1995. *Demography and Degeneration: Eugenics and the Declining Birthrate in Twentieth-Century Britain (with a new preface by the author)*. Chapel Hill and London: University of North Carolina Press.

Stopes, Marie. 1921. *Radiant Motherhood*. New York: Putnam.

Subramanian, Samanth. 2020. *A dominant character: the radical science and restless politics of J. B. S. Haldane*. London: Atlantic Books.

Vance Dorey, Annette K. 1999. *Better Baby Contests: The Scientific Quest for Perfect Childhood Health in the Early Twentieth Century*. Jefferson, NC, and London: McFarland and Company.

Wiggam, Albert Edward. 1927. Shall I Marry This Man? *Good Housekeeping* 84 (June):28-29, 253-254, 257-258, 261-262, 265-266.

The Guardian. 2011. Marie Stopes: a turbo-Darwinist ranter, but right about birth control. 02 Sep 2011.